Claims:

1. A liquid seal means comprising of:

(a) a bent tube, preferably of U shape, such U-tube having one arm connected to the pipe collecting all the vented gas released from the plant and other arm connected to a liquid holder;

(b) a pipe, fitted with a non-return valve, connecting the bottom of the liquid holder to the bottom of the U-tube;

(c) the top of the liquid holder connected to the pipe leading to the flare stack;

the U-tube and the liquid holder forming a structure so as to form the only passage available for the gas to escape from the plant to the flare stake;
such gas escaping from the plant to the flare only when the liquid in the said U-tube has been completely displaced into the liquid holder due to the pressure applied by such escaping gas.

2. A liquid seal means as claimed in in claim 1 wherein the U-tube is provided with a drain, fitted with a valve, at the bottom of the said U-tube.

3. A liquid seal means as claimed in in claim 1 and 2 wherein there is provided a pipe connecting the tip of one arm of the U-tube to the pipe connecting the top of the liquid holder.

4. A device including the liquid seal means as claimed in any of the claims 1 to 3 comprising of:

(a) a pipe means collecting all the gas vented from across the plant process carrying the said gas to knock out drum (KOD) means;

(b) a liquid seal means and piping blind means installed between the said KOD means and a flare stack means;

(c) a pipe means originating from between the said KOD means and the said liquid seal means carrying the gas to a recovery system means;

(d) a pipe means collecting all the gas vented from across the second process and carrying such gas to a second KOD means;

(e) a second liquid seal means and piping blind means installed between the said second KOD means and a second flaring means;

(f) a second pipe means originating from between the said second KOD means and the second liquid seal means carrying the gas to the recovery means; such second pipe means provided with a restricted orifice to control the flow of gas from within it to the said recovery means.

5. A device as claimed in claim 4 wherein the said second liquid seal means is capable of withstanding higher pressure than the said first liquid seal means.

6. A device as claimed in claim 4 wherein there is a unitary gas recovery means for plurality of flaring systems.

7. A liquid seal means, constructed and arranged substantially as herein described, with reference to and as illustrated in the accompanying drawings.

8. A device for the recovery of gas, constructed and arranged substantially as herein described, with reference to and as illustrated in the accompanying drawings.

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We claim:

1. A liquid seal means comprising of:

(a) a bent tube, preferably of U shape with uneven arm length, and a liquid holder, the longer arm of such U tube connected to the plant and the shorter arm connected to the liquid holder forming an opening at the upper portion of the liquid holder above the level of the liquid, such an opening of the shorter arm of the U tube inside the liquid holder positioned adjacent to or below the mouth of the passageway connecting the liquid holder to the flare stack;

(b) a pipe, fitted with a non-return valve, connecting the bottom of the liquid holder to the bottom of the U-tube;

the U-tube and the liquid holder forming a structure so as to form the only passage available for the gas to escape from the plant to the flare stack;

such gas escaping from the plant to the flare only when the liquid in the said U-tube has been completely displaced into the liquid holder due to the pressure applied by such escaping gas.

2. A liquid seal means as claimed in in claim 1 wherein the U-tube is provided with a drain, fitted with a valve, at the bottom of the said U-tube.

3. A liquid seal means as claimed in in claim 1 and 2 wherein there is provided a pipe connecting the tip of the longer arm of the U-tube to passageway connecting the liquid holder to the flare stack;

4. A device including the liquid seal means as claimed in any of the claims 1 to 3 comprising of:

(a) a pipe means collecting all the gas vented from across the plant process carrying the said gas to knock out drum (KOD) means;

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(b) a liquid seal means and piping blind means installed between the said KOD means and a flare stack means;

(c) a pipe means originating from between the said KOD means and the said liquid seal means carrying the gas to a recovery system means;

(d) a pipe means collecting all the gas vented from across the second process and carrying such gas to a second KOD means;

(e) a second liquid seal means and piping blind means installed between the said second KOD means and a second flaring means;

(f) a second pipe means originating from between the said second KOD means and the second liquid seal means carrying the gas to the recovery means; such second pipe means provided with a restricted orifice to control the flow of gas from within it to the said recovery means.

5. A device as claimed in claim 4 wherein the said second liquid seal means is capable of withstanding higher pressure than the said first liquid seal means.

6. A device as claimed in claim 4 wherein there is a unitary gas recovery means for plurality of flaring systems.

7. A liquid seal means, constructed and arranged substantially as herein described, with reference to and as illustrated in the accompanying drawings.